Summary of Pipe Spring NM GRI meeting
June 28th, 2001

Summary
A geologic resources inventory workshop was held for Pipe Spring NM (PISP) on June 28th, 2001 to discuss the park's geologic resources, to address the status of geologic mapping for compiling both paper and digital maps, and to assess resource management issues and needs. Cooperators from the NPS Geologic Resources Division (GRD), NPS Pipe Spring NM, Colorado State University, and United States Geologic Survey (GS) were present for the workshop. This was part of a multi-park scoping session also involving Petrified Forest NP, Navajo NM, Sunset Crater NM, Wupatki NM, and Walnut Canyon NM.

This involved a half-day scoping session to present overviews of the NPS Inventory and Monitoring (I&M) program, the Geologic Resources Division, and the on-going Geologic Resources Inventory (GRI). Round table discussions involving geologic issues for Pipe Spring NM included interpretation, natural resources, the status of geologic mapping efforts, sources of available data, geologic hazards, and action items generated from this meeting. A site visit was not made to PISP as part of this scoping meeting.

Currently, the greatest issue facing park resource management is dealing with the potential threats of resource loss from the springs drying up. Spring discharge rates have decreased from 60,000 gallons per day (gpd) during the 1960s to 15,000 gpd today. Tunnel Spring has captured the flow from Main Spring.

It is hoped that a new geologic investigation by the USGS at PISP will supply pertinent information on the geophysical nature of the spring system as well as produce much needed derivative geologic maps to aid in resource management at PISP.

For a list of meeting attendees, see **Appendix A *(List of Attendees for Geological Resources Inventory Workshop, June 25-29, 2001)***

Geologic Mapping
Preliminary geologic maps of the PISP area were done in the 1950s as part of crude reconnaissance mapping. The Short Creek NE, Fredonia NW, Short Creek SE, and Fredonia SW maps are preliminary at best and need significant refinement even though they are at *1:24,000* scale. The four quadrangles of interest to the park correlate to the existing photogeologic maps as follows:

QUADRANGLE OF INTEREST	EXISTING PHOTOGEOLOGIC MAP
Moccasin	Short Creek NE
Kaibab	Fredonia NW
Pipe Valley	Short Creek SE
Pipe Spring	Fredonia SW

Dave Sharrow (PISP Hydrologist) and George Billingsley (USGS-Flagstaff, AZ) informed the scoping participants of an existing USGS initiative to conduct new geologic field studies that would involve mapping the entire extent of PISP at a *1:31,680* scale.

Summary of Pipe Spring NM GRI meeting
June 28th, 2001

This would cover the four quadrangles of interest to PISP. The proposal is outlined in PMIS as project number 61103 and is titled "***Geologic Mapping and Seismic Profile Investigations in Support of Geohydrology of Pipe Spring***". As part of this project, extensive geophysical studies would be completed to better understand the nature of the springs, faults and regional hydrologic picture. Margot Truini is the USGS lead for this project and George Billingsley will likely be doing much of the field mapping. Total cost is approximately $308,000 and has been funded by the NPS-NRPP as of November 2001.

Digital Geologic Map coverage

At present, a digital coverage of the 1950s photogeologic maps is not known. In the event that digitized versions of the existing maps are not found, and until new larger scale mapping can be accomplished for the PISP area, it is suggested that the existing *1: 24,000* scale photogeologic maps be scanned, registered, rectified and digitized for use in a GIS. These can serve as a preliminary geologic map until new mapping is completed.

When the new USGS mapping for the area is completed at *1:31,680* scale, it will also be digitized as part of the deliverables, and hence a refined digital version will exist.

Miscellaneous Items of interest

- There may be significant seismic hazards associated with the Sevier Fault because it runs through PISP; hopefully the new mapping will delineate any such issues and offer suggestions on how to recognize threats to park resources.

- The USGS has already published "***Geohydrology of Pipe Spring National Monument Area, Northern Arizona***", by Margot Truini as Water Resources Investigation 98-4263

- Current natural resource staff at Pipe Spring NM are Dave Sharrow and Andrea Bornemeyer

Appendix A: List of Attendees for Geological Resources Inventory Workshop
June 25-29, 2001

NAME	*AFFILIATION*	*PHONE*	*E-MAIL*	Navajo 6-25	Grand Canyon 6-26	Petrified Forest 6-27	Flagstaff 6-28	Wupatki-Sunset Crater 6-29
John Graham	Colorado State University	970-225-6333	Jpgraham250@msn.com	X	X	X	X	X
Tim Connors	NPS, GRD	303-969-2093	Tim_connors@nps.gov	X	X	X	X	X
Sherrie Landon	NAVA	307-755-1336	Slandon@uwyo.edu	X	X			
Brenton White	NPS, NAVA	520-672-2720	Brenton_White@nps.gov	X				
Kevin Harper	NPS, NAVA Archeologist	520-672-2720	Kevin_harper@nps.gov	X				
James Charles	NPS, NAVA Superintendent	928-672-2700	James_charles@nps.gov	X			X	
George Billingsley	USGS	928-556-7198	Gbillingsley@usgs.gov		X	X	X	
Della Snyder	NPS, GRCA	928-226-0163	Della_snyder@nps.gov		X			
Allyson Mathis	NPS, GRCA Interpretation	520-638-7955	Allyson_mathis@nps.gov		X			
Debra Block	USGS	928-556-7138	Dblock@usgs.gov		X			
Jessica Wellmeyer	USGS	928-556-7267	Jwellmeyer@hotmail.com		X			
John Rihs	NPS, GRCA Hydrologist	520-638-7905	John_rihs@nps.gov		X			
Scott Graham	USGS	928-556-7270	Sgraham@usgs.gov		X		X	
Tracey Felger	NPS, GRCA GIS	520-556-7164	Tracey_felger@nps.gov		X		X	
Bill Parker	PEFO Paleontologist		William_parker@nps.gov			X	X	
Karen Beppler	NPS, PEFO	928-624-6228, ext. 263	Karen_beppler@nps.gov			X	X	
Sid Ash	PEFO	505-856-5852	Sidash@aol.com			X	X	
Sue Clements	NPS, PEFO		Tecumseh@selway.umt.edu			X	X	
Sarah Hanson	SUCR GIP	520-526-0502 517-264-3944	Slhanson@adrian.edu				X	X
Dave Sharrow	NPS, PISP	435-644-4318	Dave_sharrow@nps.gov				X	
Helen Fairley	NPS, Flagstaff Area	928-526-1157	Helen_fairley@nps.gov				X	X
Michael Ort	Northern Arizona University	928-523-9363	Michael.ort@nau.edu				X	
Nicole Tancreto	NPS, Flagstaff	928-556-7466, ext. 240	Nicole_tancreto@nps.gov				X	
Paul Whitefield	NPS, Flagstaff area parks	928-526-1157	Paul_whitefield@nps.gov				X	X
Ron Hiebert	NPS, NAU-CESU	520-523-0877	Ron.hiebert@nau.edu				X	
Todd Metzger	NPS, Flagstaff		Todd_metzger@nps.gov				X	